STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL 96-012A

INSTRUCTIONS

1. The preparing activity must complete blocks 1,2, 3, and 8. In block 1, both the document number and revision letter should be given.
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I RECOMMEND A CHANGE:	**1. DOCUMENT NUMBER** MIL-STD-2500A	**2. DOCUMENT DATE** *(YYMMDD)* 941012

3. DOCUMENT TITLE

NATIONAL IMAGERY TRANSMISSION FORMAT (VERSION 2.0)

4. NATURE OF CHANGE ***(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)***

Change Appendix B as shown on the attached sheets. Also the following paragraphs need to be changed:
5.9.1, page 80, Tagged record extensions.
5.9.1.2, page 82, Controlled extensions.
5.9.1.3, page 82, encapsulated

5. REASON FOR RECOMMENDATION

ISMC Action Item 96-006

6. SUBMITTER

a. NAME *(Last, First, Middle Initial)*	b. ORGANIZATION	
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8. PREPARING ACTIVITY

a. NAME	b. TELEPHONE *(Include Area Code)* (1) Commercial (2) AUTOVON
c. ADDRESS *(Include Zip Code)*	**IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:** Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340

MIL-STD-2500A

APPENDIX B

TAGGED RECORD EXTENSIONS

B.1 SCOPE

B.1.1 Scope. This appendix contains information about the definition, registration and control of tagged record extensions (tags) used within NITF 2.0 files. The three varieties of tagged record extensions include: registered extensions; controlled extensions; and encapsulated extensions. This appendix is a mandatory part of the standard. The information contained herein is intended for compliance.

B.2 APPLICABLE DOCUMENTS

NIMA~~CIO~~/xxxxxxx NITFS Tagged Record Extensions Register.

Implementors and acquiring agencies should contact the NTB Registrar to identify the current issue(s) of the tagged record extensions and associated documentation applicable to their specific requirements. Otherwise, the documents listed in section 2 of this standard apply to this appendix.

The NITFS Tagged Record Extensions Register is maintained as a World Wide Web on-line document. Access can be obtained through the following Universal Resource Locators (URLs):

http://jitc-emh.army.mil/nitf/nitf.htm
~~http://www.tasc.com/NITFS/~~
http://www.nima.mil/nitfs/
http://www.itsi.disa.mil/ismc/index.html
http://www.itsi.disa.mil/ismc/ntb/ntb.html

B.3 DEFINITIONS

B.3.1 Acronyms used in this appendix. The acronyms in section 3 of this standard apply to this appendix. Additional acronyms that apply to this appendix are:

RE	-	Registered Extension.
RETAG	-	Registered Extension ~~Tag~~ unique extention type identifier.
CE	-	Controlled Extension.
CETAG	-	Controlled Extension ~~Tag~~ unique extention type identifier.
DES	-	Data Extension Segment.

DESTAG - Data Extension Segment ~~Tag~~ unique DES type identifier.

RES - Reserved Extension Segment.

RESTAG - Reserved Extension Segment ~~Tag~~ unique RES type identifier.

B.3.2 Definitions used in this standard. The definitions in section 3 of this standard apply to this appendix. Additional definitions that apply to this appendix are:

a. Registered Extension ~~Tag~~. Those tagged record extensions for which the extension type identifier (six character RETAG field) and the user-defined data (REDATA field) structure is registered with the NTB. The user-defined data (REDATA field) structure is not controlled by the NTB.

b. Controlled Extension ~~Tag~~. Those tagged record extensions which are submitted for approval by the NTB and are then maintained under formal configuration management control. Both the extension type identifier (six character CETAG field) and the user-defined data (CEDATA field) structure is under configuration management control.

c. Data Extension Segment ~~Tag~~. A type of encapsulated extension with sub-header and data fields structured similarly to the standard data types in the NITF (e.g. image, label, symbol, text). The extension type identifier (25 character DESTAG field), the version (two character DESVER field), and the full underlying structure is under configuration management control as registered with the NTB.

d. Reserved Extension Segment ~~Tag~~. A type of encapsulated extension reserved for future use once defined within the NITFS.

B.4 GENERAL REQUIREMENTS

B.4.1 Registration. All tagged record extensions (RE~~TAG~~s, CE~~TAG~~s, DES~~TAG~~s, and RES~~TAG~~s) shall be registered with the Imagery Standards Management Committee's NITFS Technical Board (NTB) before use within NITF 2.0 files.

B.4.2 Registrar. The National Imagery and Mapping Agency (NIMA)~~Central Imagery Office (CIO)~~ is the designated registrar. The Joint Interoperability Test Command (JITC) serves as the executive agent to NIMA~~CIO~~ for oversight of registration activities and maintaining the register. The contact information for the NTB registrar is:

National Imagery and Mapping Agency
ATTN: NIMA/SEI
14675 Lee Road
Chantilly, VA 20151-1715
(703) 808-0888

Commander, Joint Interoperability Test Command
ATTN: NITFS Certification Test Facility
Building 57305
Fort Huachuca, AZ 85616-7020
(520) 538-5458

B.4.3 Registration Submissions. Submissions for registering tagged record extensions shall include the following:

- Identification of the submitting organization and point of contact for the submission.

- Identification of the preparing organization and point of contact for the preparing activity.

- Purpose and general description of the proposed tag(s).

- Rationale and justification for including the submission within the NITFS.

- Copy of the documentation defining the tagged record extension to be registered.

- For RE~~TAG~~s only, analysis and rationale describing how use of the proposed RE~~TAG~~ will not adversely impact community use of the standardized features defined within the NITFS.

B.4.4 Configuration Management. The NIMA registrar exercises configuration management control of the register. The register identifies the approved issue(s) and version(s) of tagged record extensions and associated specifications and documentation allowed for use within NITFS. Although another agency may be the proponent, author and/or configuration manager of tagged record extension specifications and documentation, only those issue(s) and version(s) identified and authorized in the register managed by NIMA are allowed for use within NITFS.

B.5 DETAILED REQUIREMENTS

B.5.1 Registered ~~Tags~~Extensions.

a. Only those RE~~TAG~~s accepted and registered by the NTB shall be used.

b. RE~~TAG~~s shall not be used nor submitted for registration if they adversely impact the utility of the standard features otherwise defined within the NITFS and its controlled extensions.

c. Nominated RE~~TAG~~s will be recorded in the ‘Register’ upon approval by the NTB. At that time, a RE~~TAG~~ expiration date (typically two years from registration) will be established by the NTB and recorded. A RE~~TAG~~(s) proponent may submit a request for registration renewal to the NTB, or a request for the RE~~TAG~~(s) to become “Controlled”, prior to expiration of the tag’s registration. Otherwise, the RE~~TAG~~(s) will be removed from the Register.

d. A sequence of RE~~TAG~~s may appear in the NITF header User Defined Header Data (UDHD) field or any image sub-header User Defined Image Data (UDID) field.

e. When the RE~~TAG~~ carries data that is a associated with the file as a whole, it shall appear in the UDHD field. If the RE~~TAG~~ carries data associated with an image data item in the file, it shall appear in the UDID field of that specific image data item.

f. RE~~TAG~~s may appear in a "Registered Extensions" DES when sufficient space is not available in the appropriate UDHD or UDID fields.

g. Upon receipt of a file which contains RE~~TAG~~s, a NITFS compliant system shall at least ignore the

RE~~TAG~~s and properly interpret the other legal components of the NITF file.

B.5.2 Controlled ~~Tags~~Extensions.

a. Only those CE~~TAG~~s accepted and registered by the NTB shall be used.

b. A sequence of CE~~TAG~~s may appear in the Extended Header Data (EHD) field of the NITF file header, or in the Extended Sub-header Data field for any standard data type item in the file.

c. When the CE~~TAG~~ carries data that is a associated with the file as a whole, it shall appear in the EHD field. If the CE~~TAG~~ carries data associated with a standard data item in the file, it shall appear in the Extended Sub-header Data field of that specific data item.

d. CE~~TAG~~s may appear in a "Controlled Extensions" DES when sufficient space is not available in the appropriate EHD or Extended Sub-header Data fields.

e. Upon receipt of a file which contains CE~~TAG~~s, a NITFS compliant system shall at least ignore the CE~~TAG~~s and properly interpret the other legal components of the NITF file.

B.5.3 Data Extension Segments.

a. Only those DES~~TAG~~s accepted and registered by the NTB shall be used.

b. Upon receipt of a file which contains DES~~TAG~~s, a NITFS compliant system shall at least ignore the DES ~~CETAG~~s and properly interpret the other legal components of the NITF file.

B.5.3.1 "Registered Extensions" DES. This DES is used when a series of RE~~TAG~~s is to appear in a DES as “overflow" from the NITF file header or any sub-header. The format and use of the “Registered Extensions” DES is as described in paragraph 5.9.1.3.

B.5.3.2 "Controlled Extensions" DES. This DES is used when a series of CE~~TAG~~s is to appear in a DES as "overflow" from the NITF file header or any sub-header. The format and use of the “Controlled Extensions” DES is as described in paragraph 5.9.1.3.

B.5.4 Reserved Extension Segments.

a. RES~~TAG~~s are currently undefined and shall not be used.

b. Upon receipt of a file which contains RES~~TAG~~s, a NITFS compliant system shall at least ignore the RES~~TAG~~s and properly interpret the other legal components of the NITF file. (This requirement will ease future transition for use of RES~~TAG~~s.)

Changes to the following paragraphs in the main body of Mil-Std-2500A are needed to provide consistancy with the aboved proposed replacement for Appendix B:

Change paragraph 5.9.1, page 80 as follows:

5.9.1 Tagged record extensions. Variations of the same basic extension mechanism, tagged records, are used for all extensions except the Reserved Extension Segments, which will be discussed separately. There are three varieties of tagged record extensions: registered extensions, controlled extensions, and encapsulated extensions. Figure 9 illustrates the concepts and formatting descriptions in 5.9.1.1 through 5.9.1.3. ~~A current listing of the tagged record extensions that have been registered with the NTB~~ Information about the definition, registration and control of tagged record extensions (tags) used within NITF 2.0 files is provided in Appendix B.

Change paragraph 5.9.1.2, page 82 as follows:

5.9.1.2 Controlled extensions. These extensions are defined and submitted to the NTB for approval by the NTB and, once accepted are subject to configuration management by the NTB. (See Appendix B.) ~~They are documented in a series of documents maintained by the NTB.~~ The tagged record format for controlled extensions is identical to that for registered extensions (detailed in table XV and table XVI) except that the first two letters of each field identifier change from "RE" to "CE." The six character CETAG field and the structure of the CEDATA data field shall be registered and configuration controlled. A sequence of controlled tagged record extensions can appear in the XHD field of the NITF file header or in the IXSHD, SHSHD, LXSHD, or TXSHD field of a standard data type data item in the file. When the controlled tagged record extension carries data that is associated with the file as a whole, it should appear in the XHD field, if sufficient room is available. If the extension carries data associated with a data item in the file, it should appear in the IXSHD, SHSHD, LXSHD, or TXSHD field of that item's subheader, if sufficient room is available. A controlled tagged record extension may appear in a Data Extension Segment (see 5.9.1.3 and subparagraphs), which is designated to contain controlled tagged record extensions, but only if appropriate. A controlled tagged record extension shall be included in its entirety within the XHD, a single IXSHD, SHSHD, LXSHD, or TXSHD or the single DES selected to contain it. A single controlled tagged record extension may not "overflow" file fields.

Change paragraph 5.9.1.3, page 82 as follows:

5.9.1.3 Encapsulated extensions. These extensions are similar to the controlled ~~registered~~ extensions in that each has a tag, and in this case, the tag versions are registered with the NTB. Each encapsulated extension shall appear in its own Data Extension Segment (DES) and shall conform to the DES structure (see 5.9.1.3.1). There are two reserved tags: "Registered Extensions" and "Controlled Extensions." These tags are for use when a series of registered or controlled, tagged record extensions is to appear in a DES (see 5.9.1.1 and 5.9.1.2) as "overflow" from the NITF file header or any subheader. Which header or subheader overflowed is indicated in the DESOFLOW and DESITEM field contents. Generally, the data in an encapsulated extension is user-defined. The data are anticipated to be defined typically by a specific version of a specific standard or product specification (which may or may not be under the control of the NTB). Encapsulated extensions allow the incorporation of data products in an NITF file to be disseminated along with an image. For example, Digital Terrain Elevation Data (DTED), Digital Feature Analysis Data (DFAD), or other DMA products could be distributed along with an image product to support analysis and interpretation of the image. Audio and video segments are additional examples of data that may be added to the NITF through the use of Data Extension Segments.